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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,126	02/27/2006	Mark Jozef Albert Waer	50304/113001	3050

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EXAMINER	
YOUNG, SHAWQUIA	
ART UNIT	**PAPER NUMBER**
1626	

MAIL DATE	DELIVERY MODE
08/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/595,126	WAER ET AL.	
	Examiner	Art Unit	
	Shawquia Young	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 May 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-17,19 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *13-17 and 19* is/are allowed.

6)☒ Claim(s) *20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/9/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 13-17, 19 and 20 are currently pending in the instant application. Applicants have amended claims 13, 15 and 20 and cancelled claims 18 and 21-27 in an amendment filed on May 24, 2007.

I. *Information Disclosure Statement*

The information disclosure statement (IDS) submitted on April 9, 2007 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

II. *Response to Arguments*

Applicant's arguments, filed May 24, 2007 with respect to the rejection of claim 18 under 35 USC 112, second paragraph as being indefinite; the rejection of claims 21-27 under 35 USC 112, first paragraph as failing to comply with the enablement requirement; the rejection of claim 15 under 35 USC 112, first paragraph for lacking enablement and the rejection of claim 20 under 35 USC 112, first paragraph as lacking enablement have been fully considered and are partially persuasive. The rejection of claim 18 under 35 USC 112, second paragraph as being indefinite; the rejection of claims 21-27 under 35 USC 112, first paragraph as failing to comply with the enablement requirement; the rejection of claim 15 under 35 USC 112, first paragraph for lacking enablement have been withdrawn.

Applicants traverse the rejection of claim 20 under 35 USC 112, first paragraph as lacking enablement. Applicants argue that as demonstrated by table 4 at page 69 of the specification, illustrative compounds from example 72 to example 120 show a significant effect in inhibiting the production of human TNF-α. Therefore, pteridine derivatives of claim 13 have been demonstrated to useful as the active ingredient of a pharmaceutical composition for treating diseases wherein inhibiting the production of human TNF-α is desired including ankylosing spondylitis, Sjorgren's syndrome and asthma. However, the Examiner wants to point out that simply showing that select compounds of the instant invention show a significant effect in inhibiting the production of human TNF- α, does not provide enablement for example, the treatment or prevention of ankylosing spondylitis. The Examiner has discussed this argument in more detailed down below.

Therefore, the rejection of claim 20 under 35 USC 112, first paragraph as lacking enablement has been maintained.

III. *Rejection(s)*

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 20 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In *In re Wands*, 8 USPQ2d 1400 (1988), factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. § 112, first paragraph, have been described. They are:

1. the nature of the invention,
2. the state of the prior art,
3. the predictability or lack thereof in the art,
4. the amount of direction or guidance present,
5. the presence or absence of working examples,
6. the breadth of the claims,
7. the quantity of experimentation needed, and
8. the level of the skill in the art.

The nature of the invention

Applicants are claiming a method of prevention or treatment a pathologic condition selected from the group consisting of ankylosing spondylitis, Sjorgren syndrome and asthma, by administering an effective amount of a pharmaceutical composition comprising as an active principle at least one pteridine derivative according to claim 13. See, for example, instant claim 20.

The state of the prior art and the predictability or lack thereof in the art

There is no absolute predictability even in view of the seemingly high level of skill in the art. The existence of these obstacles establishes that the contemporary knowledge in the art would prevent one of ordinary skill in the art from accepting any therapeutic regimen on its face.

The state of the prior art is that the treatment or prevention of autoimmune disorders, for example, remains highly unpredictable. The various types of autoimmune disorders have different causative agents, involve different cellular mechanisms, and consequently, differ in treatment protocol.

Applicants are also claiming methods which include the prevention or treatment Sjögren syndrome, ankylosing spondylitis and asthma.

In regards to prevention and treatment of various autoimmune disorders, the causes of autoimmune disorders are still obscure. Autoimmune diseases arise from an overactive immune response of the body against substances and tissues normally present in the body. Today there are more than 40 human diseases classified as either definite or probable autoimmune diseases. Autoimmune diseases affect 5% to 7% of the population and almost all autoimmune diseases appear without warning or apparent cause. Autoimmune diseases include lupus erythematosus, psoriasis, Sjörgen syndrome, Crohn's disease, ankylosing spondilytis, etc.

Sjörgen's syndrome is an autoimmune disorder in which immune cells attack and destroy the exocrine glands that produce tears and saliva. The hallmark symptoms of the disorder are dry mouth and dray eyes. In addition, the disorder may cause skin,

nose and vaginal dryness, and may affect other organs of the body, including the kidneys, blood vessels, lungs, liver, pancreas, and brain. Sjörgen's syndrome is estimated to strike as many as 4 million people in the United States alone making it the second most common autoimmune rheumatic disease. Diagnosing Sjörgen's syndrome is complicated by the range of symptoms a patient may manifest, and the similarity between symptoms from Sjörgen's syndrome and those caused by other conditions. There is neither a known cure for Sjörgen's syndrome nor a specific treatment to permanently restore gland secretion.

(<URL:http://en.wikipedia.org/wiki/ Sjörgen's_syndrome >)

Ankylosing spondylitis is a type of arthritis of the spine that causes swelling between your vertebrae, which are the disks that make up your spine and in the joints between your spine and pelvis. Ankylosing spondylitis is an autoimmune disease. The disease is more common and more sever in men. Early symptoms include back pain and stiffness. These problems often start in late adolescence or early adulthood. Over time, ankylosing spondylitis can fuse your vertebrae together, limiting movement. The disease has no cure but medicines can relieve the pain, swelling and other symptoms.

(<URL:http://www.nlm.nih.gov/medlineplus/print/ankylosingspondylitis.html >)

The amount of direction or guidance present and the presence or absence of working examples

There is no evidence of record, which would enable the skilled artisan in the identification of the people who have the potential of becoming afflicted with the

numerous diseases or disorders claimed herein. That a single class of compounds can be used to prevent or treat several autoimmune disorders. Applicants have not provided any competent evidence or disclosed tests that are highly predictive for the pharmaceutical use for treating or preventing any or all conditions by administering the instant claimed compounds.

The breadth of the claims

The breadth of the claims is a method of prevention or treatment a pathologic condition selected from the group consisting of ankylosing spondylitis, Sjorgren syndrome and asthma, by administering an effective amount of a pharmaceutical composition comprising as an active principle at least one pteridine derivative according to claim 13

The quantity of experimentation needed

The nature of the pharmaceutical arts is that it involves screening *in vitro* and *in vivo* to determine which compounds exhibit the desired pharmacological activities for each of the diseases and disorders instantly claimed. The quantity of experimentation needed would be undue when faced with the lack of direction and guidance present in the instant specification in regards to testing all diseases and disorders generically embraced in the claim language, and when faced with the unpredictability of the pharmaceutical art. Thus, factors such as "sufficient working examples", "the level of skill in the art" and predictability, etc. have been demonstrated to be sufficiently lacking in the instant case for the instant method claims.

The level of the skill in the art

Even though the level of skill in the pharmaceutical art is very high, based on the unpredictable nature of the invention and state of the prior art and lack of guidance and direction, one skilled in the art could not use the claimed invention without undue experimentation.

This rejection can be overcome, for example, by deleting the method claims.

IV. Conclusion

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawquia Young whose telephone number is 571-272-9043. The examiner can normally be reached on 6:00 AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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